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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/065,246	09/27/2002	Keith Glenn Mattson	201-0645 GAS	2133

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SOUTHFIELD, MI 48034

EXAMINER
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BOEHLER, ANNE MARIE M

ART UNIT	PAPER NUMBER
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3611

DATE MAILED: 05/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/065,246	<b>Applicant(s)</b> MATTSON ET AL.	
	<b>Examiner</b> Anne Marie M. Boehler	<b>Art Unit</b> 3611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 2/21/06.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-22 and 24 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14-22 is/are allowed.
- 6) ☒ Claim(s) 1-13 and 24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                    | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____  |

Art Unit: 3611

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 5, 8, 9, 10 and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamamoto (USPN 5,774,819).

Yamamoto teaches a power steering control system including a lateral dynamic sensor (lateral acceleration sensor 17 and Yaw rate sensor 18), a steering wheel angle sensor 15, and a controller 20 responsive to all of the sensors for determining a corrected steering wheel input (at step 4). The controller in reaction computing unit 23 determines a desired yaw rate, using a first transfer function, in response to detected steering angle. A modified steering wheel input T2 is determined at transfer function block f2 as a function of the desired yaw rate, as broadly recited. The correction control block (the summer of desired yaw and actual yaw) determines a corrected input ( $\gamma - \gamma_0$ ) is responsive to actual and desired yaw rate.

3. Claims 2-4, 12, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto in view of Klosterhaus (USPN 5002142).

Yamamoto discloses only one front wheel steering motor.

Klosterhaus shows a power steering system using a pair of front wheel steering assist motors to control left and right front wheels.

It would have been obvious to one of ordinary skill in the art to provide the Yamamoto steering system with two front wheel steering motors, as taught by Klosterhaus, in order to separately control wheels on left and right sides of the vehicle, for better cornering control.

4. Claims 6, 7, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto in view of Serizawa.

Yamamoto discloses front wheel steering only.

Serizawa discloses steering rear wheels in response to various control factors, including yaw rate.

It would have been obvious to one of ordinary skill in the art to control rear vehicle wheels using the Yamamoto control operation, as taught by Serizawa, in order to provide better vehicle control.

5. Claims 14-22 are allowed.

6. Applicant's arguments with respect to claims 1-13 have been considered but are moot in view of the new ground(s) of rejection.

Applicant appears to be correct in that the previous Office Action was not based on the last version of applicant's amended claims.

Applicant argues that Yamamoto fails to teach first and second control blocks. However, a transfer function, as broadly recited, can contain any mathematical operation that meets the claim. No special significance is given to the term "transfer". Therefore, in Figure 7, Yamamoto teaches a first transfer block (the "compute reference yaw rate" block), a second transfer block (the "f2" block), and a correction control block


Art Unit: 3611

(summer of desired and actual yaw), as claimed. Therefore, all of the claimed features are taught.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anne Marie M. Boehler whose telephone number is 571-272-6641. The examiner can normally be reached on 7:30-5:00, Monday-Thursday, and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lesley Morris can be reached on 571-272-6612. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Anne Marie M. Boehler  
Primary Examiner  
Art Unit 3611

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